

REMARKS

Entry of the foregoing, reexamination and further and favorable reconsideration of the subject application in light of the following remarks, pursuant to and consistent with 37 C.F.R. § 1.116, are respectfully requested.

In the present application, claims 12-30 are pending. Claims 16-30 have been examined on the merits and claims 12-15 have been withdrawn from consideration as being drawn to non-elected subject matter. The Examiner's acknowledgment in the April 2, 2003 Official Action with regard to Applicants claim for foreign priority, as well as receipt of the requested photocopy of Japanese Application 2000-113913, is noted.

The only remaining rejection in the subject application is the Examiner's rejection of claims 16 and 22-26 under 35 U.S.C. § 102(b) as allegedly being anticipated by Peterson et al. (U.S. Patent No. 5,505,955). This rejection is respectfully traversed.

As discussed previously, the '995 patent fails to expressly disclose or inherently possess the characteristics of the claimed invention as the glycoprotein disclosed in the '995 patent is not a glycoprotein which specifically binds to *Helicobacter pylori* urease. The glycoprotein of the '995 patent does not specifically bind to *Helicobacter pylori* urease because the glycoprotein of the '995 patent is derived from milk fat globules (MFG). The glycoprotein (mucin) derived from milk fat globules (MFG) has little inhibitory activity against *Helicobacter pylori* urease adherence to gastric mucosa. However, in the April 2, 2003 Official Action, the Examiner stated that applicants' argument "is not found persuasive because neither the specification nor claim defines the term 'specifically binds',

thus, the glycoprotein of [the '995 patent] although binds *Helicobacter pylori* urease weakly, it cannot be differentiated from the glycoprotein of the instant invention"

Applicants respectfully disagree with the Examiner's position.

It is well established that the language of claims are interpreted in light of the specification and with the knowledge and understanding of those of ordinary skill in the art. *See, e.g., Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582, 39 U.S.P.Q.2d 1573, 1576-77 (Fed. Cir. 1996). In this case, it is common knowledge in this field that the term "specifically binds" means that a substance binds to a particular partner with high affinity. Thus, one of ordinary skill in the art would certainly know and understand that the glycoprotein of the present invention binds to a particular substance, *i.e.*, *Helicobacter pylori*, with high affinity.

Moreover, contrary to the Examiner's assertion, this definition is supported by the specification of the present application. In particular, on page 9, lines 3-6, the specification recites that

"the glycoprotein produced by the above-mentioned methods which specifically binds to urease (hereinafter referred to as the glycoprotein of the present invention) masks the adhesion *i.e.*, urease, by predominantly binding to the urease in the stomach"

(Emphasis added.) Additionally, on page 20, lines 19-21, the specification of the instant application states that

"the glycoprotein of the present invention can inhibit infection with H. pylori by binding predominantly to urease produced by H. pylori"

(Emphasis added.) The expression "predominantly binding to the urease," or "binding predominantly to the urease," corresponds to the definition of "specifically binds." This property of the glycoprotein enables effective inhibition of *Helicobacter pylori* adhesion to gastric mucosa resulting in elimination of *Helicobacter pylori* from the stomach.

Therefore, one of skill in the art would readily know and understand, based upon the specification of the present application as well as the contemporary knowledge in the art at the time the application was filed, that the glycoprotein of the '995 patent which binds to *Helicobacter pylori* only very weakly CANNOT be a glycoprotein as claimed in the present application which specifically binds to *Helicobacter pylori* urease. As such, the glycoprotein of the '995 patent is not the same and thus does not teach or suggest applicants' claimed invention.

Since the '995 patent fails to either expressly or inherently disclose the claimed invention, the '995 patent does not anticipate applicants' claimed invention. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

Claims 17-21 have been objected to as being dependent upon a rejected base claim — claim 16. Since, for at least the reasons discussed *supra*, claim 16 is not anticipated by the prior art cited above by the Examiner, the objection to claims 17-21 should be withdrawn.

Applicants acknowledge the Examiner's statements that claims 27-30 are free of the prior art and allowed.

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In view of the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order. Such action is earnestly solicited.

In the event that there are any questions relating to this submission, or the application in general, it would be appreciated if the Examiner would telephone the undersigned attorney concerning such questions so that prosecution of this application may be expedited.

Respectfully submitted,

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